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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,479	06/29/2001	Richard Henry Dee	00-113-TAP	5932

7590 06/09/2005

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EXAMINER

CASTRO, ANGEL A

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/894,479

**Applicant(s)**

DEE, RICHARD HENRY

**Examiner**

Angel A. Castro

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-19 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,10-16,18,19 and 26-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-9,17 and 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This Office Action is in response to Amendment filed 12/21/04.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-6, 8-9, 17, 21-22, 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Coffey et al (U.S. Pat. 5,583,725).

Regarding claims 1 and 17, Coffey et al discloses an apparatus for reading data (figures 3-4), comprising:

a magnetic tape media contact surface configured to contact a magnetic tape media (column 4, lines 1-2); and

a reduced sensitivity spin valve sensor 30, wherein the reduced sensitivity spin valve sensor senses an applied magnetic field from the magnetic tape media when the magnetic tape media passes by the reduced sensitivity sensor, and wherein the reduced sensitivity spin valve sensor has a sensitivity less than magnetic disk head sensors, and wherein the reduced sensitivity spin valve sensor has a sensitivity that is reduced from a sensitivity of the magnetic disk head spin valve sensor by increasing an effective anisotropy field of a free layer 35, 36 in the reduced sensitivity spin valve sensor (column 3, lines 3-7).

Regarding claims 5 and 21, Coffey et al discloses that the effective anisotropy field of the reduced sensitivity spin valve sensor is increased by increasing a stiffness of a free layer of the reduced sensitivity spin valve sensor (see column 2, line 65, to column 3, line 7).

Regarding claims 6 and 22, Coffey et al discloses that the stiffness of the free layer is increased by using at least one permanent magnet stabilizing element 42, 43 to impart a stiffening magnetic field to the free layer.

Regarding claims 8 and 24, Coffey et al discloses that the stiffness of the free layer is increased by using an antiferromagnet 41 to impart a stiffening magnetic field to the free layer.

Regarding claims 9 and 25, Coffey et al discloses that the stiffness of the free layer is increased by using both an antiferromagnet 41 and at least one permanent magnet stabilizing element 42, 43 to impart a stiffening exchange magnetic field to the free layer (see figures 3-4 and column 5, lines 49-56).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coffey et al in view of Tobise et al.

Regarding claims 7 and 23, Coffey et al discloses the apparatus for reading data described above. Coffey et al does not specifically disclose that the at least one permanent magnet stabilizing element is a cobalt-platinum-chromium magnet. Tobise et al discloses an apparatus for reading data comprising at least one permanent magnet stabilizing element made of cobalt-platinum-chromium magnet (column 5, line 26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the apparatus of Coffey et al with at least one permanent magnet stabilizing element made of cobalt-platinum-chromium magnet as taught by Tobise et al.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the apparatus of Coffey et al with at least one permanent magnet stabilizing element made of cobalt-platinum-chromium magnet as taught by Tobise et al as doing this would allow to have a proper residual flux density without having a very thin layer and at the same time limiting the Barkhausen noise.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1, 5-9, 17 and 21-25 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pinarbasi et al (U.S. Pat. 6,315,839) discloses a method of making a keeper layer

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for a spin valve sensor; Urai et al (U.S. Pat. 6,256,177) discloses a giant magnetoresistive sensing element.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel A. Castro whose telephone number is 571-272-7584. The examiner can normally be reached on Monday through Thursday, 8 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**ANGEL CASTRO**  
**PRIMARY EXAMINER**  
Angel Castro, Ph.D.